ABSTRACT BOOK

27TH INTERNATIONAL CONGRESS FOR CONSERVATION BIOLOGY

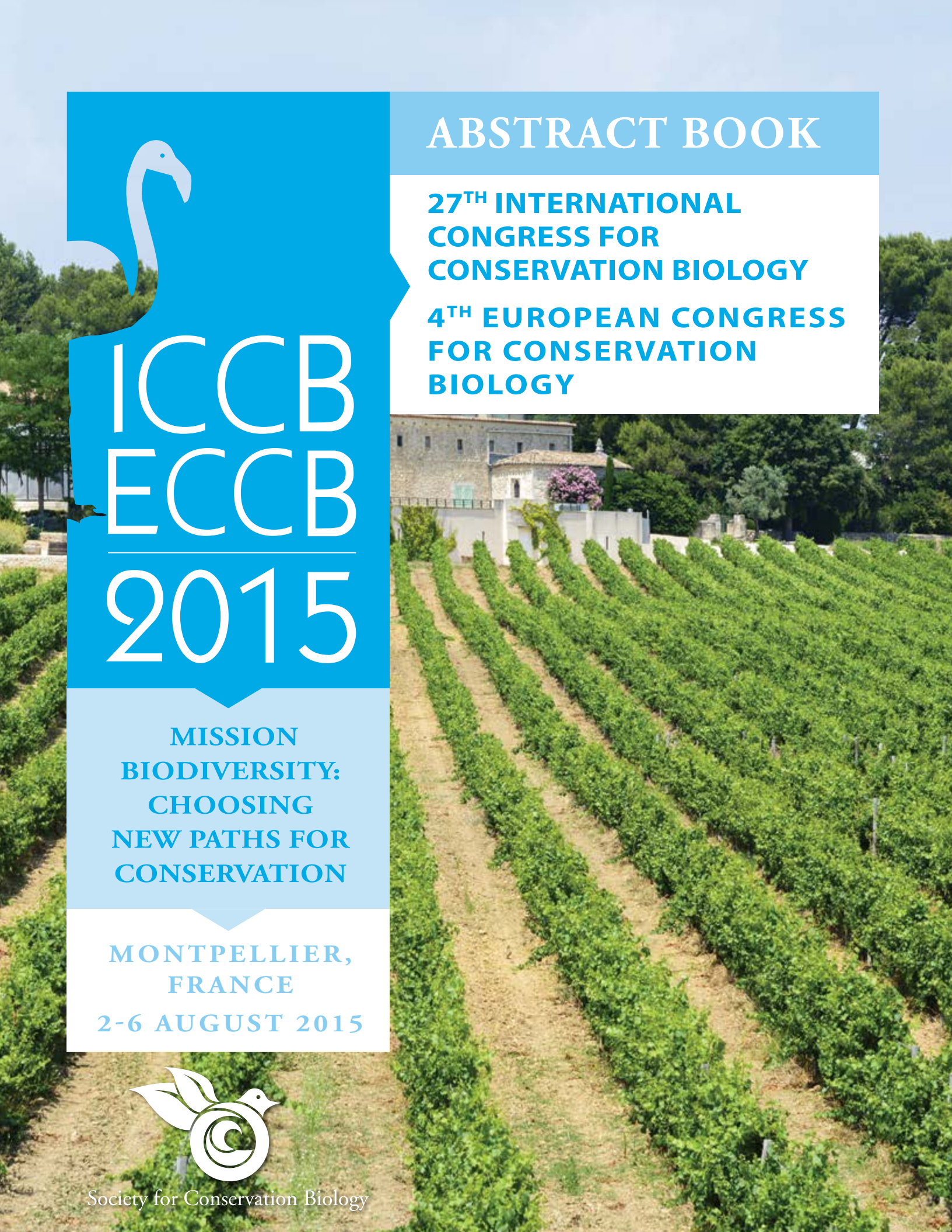
4TH EUROPEAN CONGRESS FOR CONSERVATION BIOLOGY

ICCB ECCB 2015

MISSION BIODIVERSITY: CHOOSING NEW PATHS FOR CONSERVATION

MONTPELLIER, FRANCE

2-6 AUGUST 2015



Society for Conservation Biology

ICCB ECCB 2015

ABSTRACT BOOK

The Society for Conservation Biology (SCB), a global society of conservation students and professionals, held in August 2015 in Montpellier, France its 27th International Congress for Conservation Biology, jointly hosted with the 4th European Congress for Conservation Biology. SCB celebrated its 30th birthday with its largest conference ever, comprised of 2063 attendees, 782 poster presentations and 943 oral presentations organized in 74 contributed sessions and 73 symposia sessions.

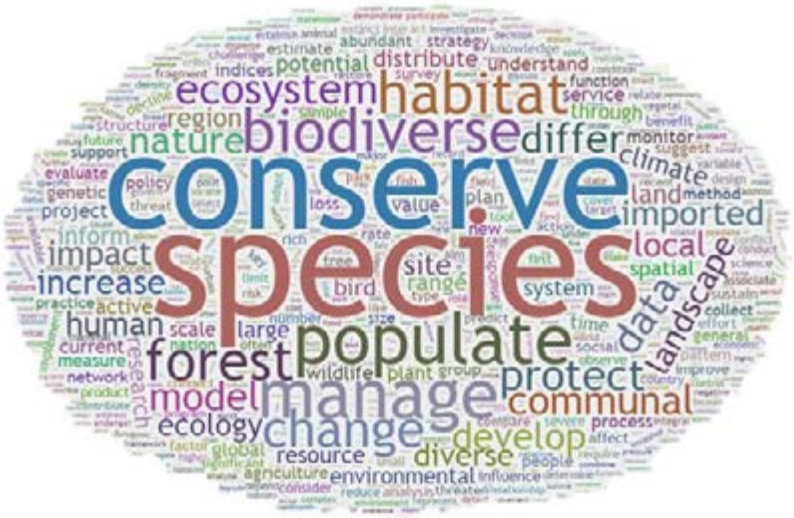
The theme of the conference "Mission Biodiversity: Choosing new paths for conservation" represented a response to the fact that the traditional methods for conserving biodiversity need to adapt and change to match the ever-changing nature and needs of today's world. It emphasized that the same rapid and ongoing biophysical and societal changes our world is facing also affect conservation science and practice.

We are asking very different questions than what we asked years ago, and using different methods to get the data we need to answer these questions. Increasingly, we work with people from different disciplines such as political science, computer science, economics, and social science, among others. We investigate different challenges that range from new pathogens and invasive species to new drivers of habitat loss such as oil palm production in West Africa to tangled socio-political issues such as the growing illegal trade of species and their parts on the internet. We are developing new methods and tools to address these challenges with on-the-ground conservation, such as using drones and new remote-sensing technology for monitoring and conservation enforcement or citizen science projects for collecting data and engaging the public. Unsurprisingly, one of the most common words in abstracts presented at ICCB-ECCB abstracts was "change." The ICCB-ECCB 2015 theme and its scientific content, summarized in this Abstract Book, document these changes and our need to keep up with, and even anticipate them for better conservation science and practice.

ICCB-ECCB 2015 featured several presentations, workshops and training courses that provided solutions to prevent or mitigate anthropogenic threats, and celebrated several exemplary success stories through the mini-plenaries from the Society's Distinguished Service and Early Career Conservationist awardees. ICCB-ECCB 2015 also featured an open debate starring Peter Kareiva and Clive Spash on Conservation Biology today; and how its fundamental principles and values are changing over time.

We would like to thank all participants, organizers and sponsors of ICCB-ECCB 2015 for their excellent work at the conference, and we look forward to many more conservation success stories in the coming years.

—Piero Visconti, Marit Wilkerson, Edward Game and Raphael Mathevet



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For any queries on regards to this book of abstracts please contact Nathan Spillman nspillman@conbio.org

Society for Conservation Biology

ABOUT THE SOCIETY FOR CONSERVATION BIOLOGY

SCB is a global community of conservation professionals with members working in more than 100 countries who are dedicated to advancing the science and practice of conserving Earth's biological diversity. The Society's membership comprises a wide range of people interested in the conservation and study of biological diversity: resource managers, educators, government and private conservation workers, and students.

SCB publishes the flagship peer-reviewed journal of the field, *Conservation Biology,* and the cutting-edge online journal, *Conservation Letters.* The Society provides many benefits to its community, including local, regional, and global networking, an active conservation-policy program, and free online access to publications for members in developing countries. SCB also administers a postdoctoral program, the David H. Smith Conservation Research Fellowship Program, sponsored by the Cedar Tree Foundation.

can be high, with values up to 290 mt/km2 being recorded. This high fisheries biomass is incongruent with the population structure and life history of Gulf fishes. Although there is no inherent barrier to species movement into the Arabian Gulf, the diversity of reef fish populations substantially reduces when moving from sites between the western Indian Ocean (WIO) to inside the Arabian Gulf (only 43 of the 134 reef fish species found within the WIO present), while lower average abundance of conspecific populations and lower size at age are apparent for the majority of Arabian Gulf reef fish populations. I argue that such discordance between population structure and high fisheries productivity may be associated with the structure and spatial configuration of coral reef habitats, and the resulting aggregation of fisher effort on small, spatially disparate fishing grounds. Such regionally specific fishing impacts have resulted in substantial reductions in Gulf fisheries resources, while also highlighting the importance of quantifying marine habitat throughout the region and the increasing role of marine reserves in protecting nationally important resources against widespread and increasingly destructive exploitation.

RESTRICTING AN INTRODUCED VERTEBRATE'S ACCESS TO INVASION HUBS REDUCES BOTH THEIR ABUNDANCE AND IMPACT ON A NATIVE PREDATOR

Benjamin Feit
University of Western Sydney
Jonathan Webb, University of Technology Sydney ; Tim Jessop, University of Melbourne ; Shawn Laffan, University of New South Wales ; Tim Dempster, University of Melbourne ; Mike Letnic, University of New South Wales

Many biological invasions do not occur as gradual expansions along a continuous front, but from expansion of satellite populations that become established at "invasion hubs". Targeted control at invasion hubs can be an effective way to suppress invaders' populations but there is little evidence that such control activities alleviate the impacts of invaders. Proliferation of artificial water points (AWP) to increase livestock production has fundamentally changed the ecology of dryland ecosystems by facilitating range expansions of water-dependent native and introduced species. In Australia's rangelands AWP that use earthen dams as reservoirs function as invasion hubs for introduced cane toads (Rhinella marina) by allowing toads to rehydrate during periods of hot dry conditions. We investigated whether restricting toads' access to water at AWP can reduce toad populations and alleviate their impact on a monitor lizard, the sand goanna (Varanus gouldii) at risk of being poisoned by toads. Over a 3 year period, we compared cane toad abundance and occurrence of goanna tracks along 10 km transects radiating away from AWP fitted with two types of reservoir, dams (n=10) and tanks (n=21). Toads could readily access water stored in dams, but not tanks. Cane toads were more abundant at dams than tanks. Toad abundance decreased with distance from AWP. When distance to AWP was held constant, toads occurred in higher abundances in the vicinity of dams than tanks. Conversely, the probability of encountering goanna tracks was greater in the vicinity of tanks than dams when distance to AWP was held constant. Our results indicate that restricting access to invasion hubs, by eliminating or modifying invasion hub habitats, can reduce the abundance of invasive species and their impacts. In dryland ecosystems, water-exclusion strategies tailored for specific species can be implemented at AWP to control populations of water-dependent invaders and alleviate their impacts.

217. ORCHISAUVAGE.FR: AN AMBITIOUS PARTICIPATORY SCIENCE PROJECT SUPPORTING THE KNOWLEDGE AND CONSERVATION OF WILD ORCHIDS

Philippe Feldmann
Cirad
Sophie DAULMERIE, SFO ; Alain GÉVAUDAN, SFO ; Jean-Marie NADEAU, SFO ; Michel NICOLE, SFO ; Daniel PRAT, SFO

Session 217. Orchisauvage.fr is a collaborative project which aims at collecting and sharing orchid data throughout France using ITC and Internet tools. It is coordinated by the French Orchid Society (SFO). Its main objectives are conservation and knowledge sharing on orchid's data. This project is open to everyone. It covers the whole country (France mainland and Corsica). The data collected by the members are uploaded on line. The web site is user friendly. Data can be shared between all participants. The use of recorded data is regulated. Uploaded data are checked out through a validation process (experts). Since its release in February 2014. It has encountered a significant success with more than 1 000 registered people and about 80 000 orchid observations. The data providers are new and much younger then the initial SFO members. More than 80 %, are new, with 5 times more people under 40 years old than in the initial membership. Motivations of these new contributors will be discussed, in order to adapt Orchisauvage to their needs and expectations and to enable them to take part into the whole process. Orchisauvage is managed by volunteers. The web site coordinators and data providers are working on ways to keep a high rate of participation, expand the involvement in all steps of the web based project and understand the benefit of such a participatory science project. The second part of the 217 session discussion will help us to explore future developments aiming at sharing and merging data between different NGO's and stakeholders. It will look at how to disseminate the recorded information and how to develop new on-line tools (GIS, stats, communication,…) made available to participants, such as links to conservation actions and members pages